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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,285	02/01/2002	Gunter Igel	Mic.6222	4832

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EXAMINER	
JENKINS, JERMAINE L	
ART UNIT	PAPER NUMBER
2855	

DATE MAILED: 06/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/857,285	IGEL ET AL.	
	Examiner	Art Unit	
	Jermaine Jenkins	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-16 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Acknowledgement of the preliminary amendment filed 02/01/02 has been made.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show elements "100" & "4" in Figure 1 and element "200" in Figure 2 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "2" has been used to designate both substrate and detector. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 3-7, 12, 13 & 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In regards to claims 3 & 4, the applicant does not reasonably convey or describe the relevance of the spatial distance between the signal source and detector being constant or variable and the transmission properties of the transmission channel between the signal source and detector being constant or variable within the specification.

In respect to claim 16, the specification fails to show how the conductor tracks are situated and why are the conductive tracks used to form the signal source?

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 2, 5, 6, 11 & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schier (5,635,919) in view of Kats et al (5,910,647).

In regards to claim 1, Schier teaches a sensing apparatus comprising a signal source (12) that emits signals and a signal detector (16) that receives the transmitted

signals (Column 3, lines 14-19), and an evaluation unit (27) that function to compute the value of physical qualities, such as stress, strain, distance measurement, etc. (Column 2, lines 37-41; Column 3, lines 20-32; Column 5, lines 56-63). However, Schier does not teach the mounting of the signal source and the signal detector onto separate substrate bodies.

Kats et al teaches an electronic device teaching the placement of a signal source (520) mounted onto a first substrate (520a) and a signal detector (522) mounted onto a second substrate (522a) (Column 10, lines 7-10 & 28-31, See Figure 9). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate two separate substrates with a transmitter and a receiver mounted respectively as shown by Kats in the sensing apparatus of Schier for providing a means for realizing a position determining apparatus that is suitable for use in multiple dimensions.

In combination Schier and Kats et al does not teach a control unit that turns on and off the signal source, signal detector, and evaluation unit each individually. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a switching mechanism connected to any electronic device within a system for the purpose of engaging in the repairing and/or replacing of the respective electrical element.

In respect to claims 5, 6 & 15, Schier teaches the evaluation unit (27) that function to compute the value of physical qualities, such as stress, strain, distance measurement, etc. (Column 2, lines 37-41; Column 3, lines 20-32; Column 5, lines 56-63).

In respect to claims 8-10, Schier and Kats et al teaches the claimed invention except the integration of the control and evaluation units into the first and second substrates respectively. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to imbed the control and evaluation units into the respective substrates for the sole purpose of minimizing electromagnetic interferences.

In respect to claim 11, Schier teaches the use of amplifier (21) to amplifying a signal (Column 3, lines 56-58).

In respect to claim 13, Kats et al teaches the inclusion of a damping device (442d) located on substrate (422a) inhibiting reflections of interferences (Column 8, lines 51-55).

8. Claims 12 & 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schier (5,635,919) and Kats et al (5,910,647) as applied to claims 1, 2, 5, 6, 11 & 13 above, and further in view of Hsu (5,689,107).

In regards to claims 12 & 14, Schier and Kats et al teaches the claimed invention measuring the spatial resolution except the signal detector being sub-divided into a plurality of detector elements. However, Hsu teaches having a diaphragm (350) that may be attached to the substrate (310) that comprises a plurality of detector elements (330, 340) to obtain measured values (Column 2, lines 10-12; Column 5, lines 24-38). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a diaphragm and a plurality of sensing elements as shown in Hsu in the sensing apparatuses of Schier and Kats for the purpose of providing more accurate and sustainable measurement values.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermaine Jenkins whose telephone number is 703-305-3839. The examiner can normally be reached on Monday-Friday 8am-430pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 703-305-4816. The fax phone numbers for the organization where this application or proceeding is assigned are 703-306-7382 for regular communications and 703-305-3839 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

Jermaine Jenkins
A.U. 2855
JJ
June 11, 2003

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